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10/589,479	08/14/2006	William Veronesi	60469-092PUS1;PA-000.0519	8352

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EXAMINER	
WEST, JEFFREY R	
ART UNIT	**PAPER NUMBER**
2857	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.**	**Applicant(s)**	
	10/589,479	VERONESI ET AL.	
	Examiner	**Art Unit**	
	Jeffrey R. West	2857	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _26 November 2008_.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-24_ is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) _21-24_ is/are allowed.

6)☒ Claim(s) _1-16 and 20_ is/are rejected.

7)☒ Claim(s) _17-19_ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _05 December 2007_ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

1. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Response to Appeal Brief

2. In view of the Appeal Brief filed on 26 November 2008, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount

previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below.

/Eliseo Ramos-Feliciano/
Supervisory Patent Examiner, Art Unit 2857

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

It has been held that the first step in determining whether a claim recites patent eligible subject matter is to determine whether the claim falls within one of the four statutory categories of invention recited in 35 USC § 101: process, machine, manufacture and composition of matter. The latter three categories define “things” or “products,” while a “process” consists of a series of steps or acts to be performed. For purposes of § 101, a “process” has been given a specialized, limited meaning by the courts.

Based on Supreme Court precedent and recent Federal Circuit decisions, it has been held that a § 101 process must (1) be tied to another statutory class (a particular machine or apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing. If neither of these requirements is

met by the claim, the method is not a patent eligible process under § 101 and should be rejected as being directed to non-statutory subject matter. Thus, to qualify as a § 101 statutory process, the claim ***should*** positively recite the other statutory class (the thing or product) to which it is tied, ***for example*** by identifying the apparatus that accomplishes the method steps, or positively recite the subject matter that is being transformed, ***for example*** by identifying the material that is being changed to a different state. (emphasis added).

As such, claims 1-15 only recite a method that includes steps that could be purely mental and the claim does not in any way tie the process to another statutory class nor does the claim transform an article to a different state or thing. Such claims are therefore non-statutory under 35 U.S.C. 101.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2002/0194935 to Clarke et al. in view of U.S. Patent No. 7,237,656 to Barrett et al.

With respect to claim 16, Clarke discloses a system for determining a condition of

an elevator tensile support (0022, lines 2-4) comprising a device for measuring an electrical characteristic of at least a portion of a tensile support (0021, lines 1-11) and a controller that determines a current condition of the tensile support (0016, lines 5-8, 0021, lines 1-11, and 0028, line 1 to 0029, line 3) by relating the measured characteristic to a predetermined data set indicating a relationship between corresponding apparent characteristic values and conditions of the tensile support, the relationship being based upon load information (0028, lines 1-11)

With respect to claim 20, Clarke discloses that the electrical characteristic is resistance (0021, lines 1-2 and 0028, lines 1-2).

As noted above, the invention of Clarke teaches many of the features of the claimed invention and while the invention of Clarke does teach relating the measured characteristic to a predetermined data set including a relationship between corresponding apparent characteristic values and conditions of the tensile support, wherein the relationship is based upon load information, Clarke does not explicitly indicate that the relationship is based on a determined rate of degradation for the selected load.

Barrett teaches an elevator load weighting device including means for positioning a selected load on a plurality of tension members (column 2, lines 1-6 and column 3, lines 4-9) and determining a rate of degradation of an individual tension member for a selected load by monitoring how the degradation varies over time based on how much of the selected load is carried by each tension member (col. 3, lines 10-16).

It would have been obvious to one having ordinary skill in the art to modify the

invention of Clarke to explicitly indicate that the relationship is based on a determined rate of degradation for the selected load because the invention of Clarke does determine degradation of a tensile support based on a measured resistance and load information and Barrett suggests that the combination would have improved the degradation analysis of Clarke by using the load information to determine how stretching/degradation varies over time thereby allowing Clarke to better predict when such stretching/degradation will result in support failure (column 3, lines 10-16).

7. Claims 16 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2004/0046540 to Robar et al. in view of U.S. Patent No. 7,237,656 to Barrett et al.

With respect to claim 16, Robar discloses a system for determining a condition of an elevator tensile support (0001, lines 1-4) comprising a device for measuring an electrical characteristic of at least a portion of a tensile support (0007, lines 6-9) and a controller that determines a current condition of the tensile support (0006, lines 1-7, 0047, lines 1-7, and 0051, lines 1-11) by relating the measured characteristic to a predetermined data set indicating a relationship between corresponding apparent characteristic values and conditions of the tensile support, the relationship being based upon load information (0049, lines 1-8).

With respect to claim 20, Robar discloses that the electrical characteristic is resistance (0007, lines 6-9).

As noted above, the invention of Robar teaches many of the features of the claimed invention and while the invention of Robar does teach relating the measured characteristic to a predetermined data set including a relationship between corresponding apparent characteristic values and conditions of the tensile support, wherein the relationship is based upon load information, Robar does not explicitly indicate that the relationship is based on a determined rate of degradation for the selected load.

Barrett teaches an elevator load weighting device including means for positioning a selected load on a plurality of tension members (column 2, lines 1-6 and column 3, lines 4-9) and determining a rate of degradation of an individual tension member for a selected load by monitoring how the degradation varies over time based on how much of the selected load is carried by each tension member (col. 3, lines 10-16).

It would have been obvious to one having ordinary skill in the art to modify the invention of Robar to explicitly indicate that the relationship is based on a determined rate of degradation for the selected load because the invention of Robar does determine degradation of a tensile support based on a measured resistance and load information and Barrett suggests that the combination would have improved the degradation analysis of Robar by using the load information to determine how stretching/degradation varies over time thereby allowing Robar to better predict when such stretching/degradation will result in support failure (column 3, lines 10-16).

Allowable Subject Matter

8. Claims 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and claims 21-24 are considered to be allowable over the cited prior art because none of the cited prior art teaches or suggests, in combination with the other claimed limitations, determining a mean degradation of a tensile support from a determined rate of degradation of the tensile support for a selected load and determined sheave contact and load information, wherein the sheave contact and load information are determined using a modeled configuration of at least one selected elevator system and an estimated elevator traffic pattern.

Response to Arguments

9. Applicant's arguments filed November 26, 2008, have been fully considered but they are not persuasive.

In response to the rejection of claims 16 and 20 under 35 U.S.C. §103 based on Clarke in view of Barrett, Applicant argues:

> The Examiner admits that the *Clarke* reference "does not" explicitly indicate that a relationship is based on the determined rate of degradation for a selected load." The Examiner then contends that the *Barrett* reference teaches an elevator load weighing device "including means for positioning a selected load on a plurality of tension members (column 2, lines 1-6 and column 3, lines 4-9) and determining a rate of degradation of an individual tension member for a selected load by monitoring how the degradation various over time based on how much of the selected load is carried by each tension member" (column 3, lines 10-16). (Final Office Action, page 5)

First, with respect to the teachings of Clarke, the Examiner asserts that Clarke discloses a system for determining a condition of an elevator tensile support:

> Each mounting bracket grips the belt body, thereby affixing it to a cable drum or elevator car or other piece of equipment. (0022, lines 2-4)

comprising a device for measuring an electrical characteristic of at least a portion of a tensile support:

> The magnitude of R1 is first measured in the unstressed or unloaded condition. R4 is then adjusted to balance the bridge in the unstressed condition. Then, as the belt is loaded, the strain changes the resistivity of the tensile cords, causing a voltage V to change. The voltage change may include registration of strain up to and including total failure of one or all of the tensile cords. One can appreciate that failure of a single tensile cord on the circuit will cause resistance R1 to approach ∞ω. This will result in a marked change in voltage V across the bridge, alerting a user who can then take the equipment out of service or make repairs. (0021, lines 1-11)

and a controller that determines a current condition of the tensile support to provide visual indications to a display, to alert a user of cord failure, and to compile data over time for maintenance and/or failure prediction:

> A meter or other appropriate output display 300 can be connected across the bridge to provide a visual reading of a voltage across the bridge and thereby across the tensile member. (0016, lines 5-8)

> The magnitude of R1 is first measured in the unstressed or unloaded condition. R4 is then adjusted to balance the bridge in the unstressed condition. Then, as the belt is loaded, the strain changes the resistivity of the tensile cords, causing a voltage V to change. The voltage change may include registration of strain up to and including total failure of one or all of the tensile cords. One can appreciate that failure of a single tensile cord on the circuit will cause resistance R1 to approach ∞ω. This will result in a marked change in voltage V across the bridge, alerting a user who can then take the equipment out of service or make repairs. (0021, lines 1-11)

> FIG. 4 is a graph of the resistance of a tensile member versus belt tension. The example depicted in the graph comprises a belt having ten steel cords 10 that are serially connected. The y-axis depicts the increase in resistance over a given base value for R1. The base value for R1 is measured in the unstressed condition. One can see that the resistance increases generally linearly with the increase in tension or load. One can appreciate that the resistance would continue to increase with load until one or all of the tensile cords fails. Upon failure of a tensile cord the resistance goes to ∞ ω.
>
> Compilation of the resistance readings over time would be a helpful tool in identifying belt maintenance intervals or to predict failures. (0028, line 1 to 0029, line 3)

by relating the measured characteristic to a predetermined data set indicating a relationship between corresponding apparent characteristic values and conditions of the tensile support, the relationship being based upon load information:

> FIG. 4 is a graph of the resistance of a tensile member versus belt tension. The example depicted in the graph comprises a belt having ten steel cords 10 that are serially connected. The y-axis depicts the increase in resistance over a given base value for R1. The base value for R1 is measured in the unstressed condition. One can see that the resistance increases generally linearly with the increase in tension or load. One can appreciate that the resistance would continue to increase with load until one or all of the tensile cords fails. Upon failure of a tensile cord the resistance goes to ∞ω. (0028, lines 1-11)

The Examiner also asserts that Clarke further discloses that the electrical characteristic is resistance:

> The magnitude of R1 is first measured in the unstressed or unloaded condition. (0021, lines 1-2)
>
> FIG. 4 is a graph of the resistance of a tensile member versus belt tension. (0028, lines 1-2).

As noted above, the invention of Clarke teaches many of the features of the claimed invention and while the invention of Clarke does teach relating the

measured characteristic to a predetermined data set including a relationship between corresponding apparent characteristic values and conditions of the tensile support, wherein the relationship is based upon load information, Clarke does not explicitly indicate that the relationship is based on a determined rate of degradation for the selected load.

Barrett then teaches an elevator load weighting device including means for positioning a selected load on a plurality of tension members:

> According to the present invention a load cell is fixed between the spring and an upper surface of the mounting plate and spring such that the load cell measures the weight borne by the tension member. For elevators having multiple tension members, there is a load cell for each tension member. (column 2, lines 1-6)

and determining a rate of degradation of an individual tension member for a selected load by monitoring how the degradation varies over time based on how much of the selected load is carried by each tension member:

> The load cell 56 is conventional consisting of a bonded foil stranded and full bridge (not shown), which produces an electrical signal proportional to the load. The signal from each load cell 56 is summed together to obtain the total load. The signals may also be analyzed individually to determine the portion of the load carried by each tension member.
>
> By measuring the load on each tension member 28, the springs 44 may be adjusted by either tightening or loosening the nuts 50 and 52 to equalize the load carried by each tension member 28. By measuring the load in each tension member 28, individually, any stretching of degradation of the tension members 28 can also be sensed as the loads carried by each tension member 28 varies over time. (column 3, lines 4-16)

Applicant argues:

Applicant respectfully disagrees with the Examiner's conclusion and in

particular with respect to the teachings of the *Barrett* reference. The only statement in the *Barrett* reference regarding degradation is found in column 3, lines 10-16. Specifically, the *Barrett* reference states, "by measuring the load in each tension member 28, individually, any stretching of [sic, or] degradation of the tension members 28 can also be sensed as the load carried by each tension member 28 varies over time." There is nothing in that statement that indicates any determination of a *rate* of degradation. The only thing that is sensed is degradation, itself. There is no relationship between any degradation sensed in the *Barrett* reference and any change in that degradation over time that would somehow correspond to a rate of degradation.

Determining a rate of degradation is a different thing than simply sensing degradation. Only the latter can be found in the *Barrett* reference. Without some analysis of how any detected degradation changes with respect to time in the *Barrett* reference, it is not possible to interpret that reference as teaching a rate of degradation. That is simply not determined in the *Barrett* reference.

Perhaps the Examiner is using the indication in the *Barrett* reference that the load is varying over time. How a load varies over time does not describe how degradation varies over time as suggested by the Examiner in the Office Action. There is a distinction between a load varying over time and degradation varying over time. For example, an elevator system load can vary from one run to another. A first run may include a single passenger in the car. The car then may return empty to a lobby floor (e.g., a different load on the return). A subsequent run of the elevator car may include five passengers (e.g., another load). The different number of passengers during the different times of elevator run varies the load on the elevator system.

Measuring degradation in the *Barrett* reference does not correspond measuring any rate of degradation. Instead, the *Barrett* reference only teaches, as quoted above, that by measuring load in each tension member, individually, stretching or degradation can be sensed because the load does vary over time. There is no tracking of how the load varies over time and there is no tracking of how the degradation varies over time. Therefore, it is not a reasonable interpretation of the *Barrett* reference to construe those teachings as if they somehow teach determining a rate of degradation.

Without any determination regarding a rate of degradation in the *Barrett* reference, the Examiner's proposed combination does not establish a *prima facie* case of obviousness. Even if the proposed combination could be made, it does not provide a result that establishes a *prima facie* case of obviousness because there is nothing in that proposed combination corresponding to determining a rate of degradation as suggested by the Examiner.

The Examiner first asserts that a “rate” is generally defined as a certain quantity or amount of one thing considered in relation to a unit of another thing and in no way

is necessarily tied to a change over time. For example, one having ordinary skill in the art would recognize many different rates that are not defined as a change over time such as a spring rate, expressed as a change in load per unit deflection, a fuel consumption rate, expressed as a ratio of number of miles to number of gallons, and literacy rate, mortality rate, and/or occupancy rates, expressed as a proportion in relation to a whole.

As such, one having ordinary skill in the art would recognize that Barrett's indication that "[b]y measuring the load in each tension member 28, individually, any stretching of degradation of the tension members 28 can also be sensed as the loads carried by each tension member 28 varies over time" is disclosing, at very least, a degradation rate expressed as a relation of degradation with respect to load.

Furthermore, the Examiner asserts that Barrett's indication that "[b]y measuring the load in each tension member 28, individually, any stretching of degradation of the tension members 28 can also be sensed as the loads carried by each tension member 28 varies over time" is disclosing that the load in each tension member is measured over time. This section also indicates that tension member degradation can be sensed based on the measurement of the loads over time. Therefore, since the degradation is sensed with respect to the measured load and since the load is measured with respect to time, one having ordinary skill in the art would recognize that the degradation is sensed with respect to time. In this way, even adhering to Applicant's definition of degradation rate being a change in degradation over time, Barrett discloses such a feature.

For these reasons, the Examiner maintains that Barrett teaches determining a rate of degradation of an individual tension member for a selected load by monitoring how the degradation varies over time based on how much of the selected load is carried by each tension member and, consequently, the Examiner maintains the rejection of claims 16 and 20 under 35 U.S.C. §103 based on Clarke in view of Barrett.

The Examiner also asserts that it would have been obvious to one having ordinary skill in the art to modify the invention of Clarke to explicitly indicate that the relationship is based on a determined rate of degradation for the selected load because the invention of Clarke does determine degradation of a tensile support based on a measured resistance and load information and Barrett suggests that the combination would have improved the degradation analysis of Clarke by using the load information to determine how stretching/degradation varies over time thereby allowing Clarke to better predict when such stretching/degradation will result in support failure (column 3, lines 10-16).

With respect to the rejection of claims 16 and 20 under 35 U.S.C. §103 based on the combination of Robar and Barrett, Applicant argues

> The Examiner admits that the *Robar* reference does not "explicitly indicate that a relationship is based on a determined rate of degradation for a selected load." The Examiner attempts to fill this gap with the *Barrett* reference. As already explained, the *Barrett* reference does not contain any teaching regarding determining a rate of degradation. Therefore, there is no prima facie case of obviousness and the rejection must be reversed.

With respect to claim 16, Robar discloses a system for determining a condition of an elevator tensile support:

> The present invention relates to elevator ropes and, more particularly, to a method and apparatus for testing elevator ropes to detect degradation using electrical or magnetic energy. (0001, lines 1-4)

comprising a device for measuring an electrical characteristic of at least a portion of a tensile support:

> Another embodiment of the present invention involves applying electric current to a rope and measuring resistance values for comparison to pre-stored data in order to determine rope condition. (0007, lines 6-9)

and a controller that determines a current condition of the tensile support as part of continuous monitoring and detection (0047, lines 1-7)

> Various objects of the present invention include providing a method and apparatus for detecting deterioration of steel ropes or compound ropes having steel ropes as members, wherein detection is practical in time, cost and complexity, wherein continuous monitoring and detection are practical and efficient, and further wherein detection is accurate and reliable. (0006, lines 1-7)

> According to the present invention, an electrical resistance measuring device is applied to a rope to be tested so that measured resistance through the cord can be correlated to pre-stored test data for an ideal rope. Predetermined threshold data values are used to determine when a tested rope or belt should be replaced. The resistance measuring device may be, for example, a Kelvin bridge. (0047, lines 1-7)

> As shown in FIG. 10, current input and output leads (608, 610) can be made to an elevator rope (602) at termination points (614, 616) in an elevator system. A power source (618) and controller (620), shown schematically, may be connected via hardwire or other conventional means. The controller (620) may be programmed to correlate resistivity measurements with predetermined data indicative of tension-load bearing strength of the rope (602). A remote controller may be used through RF, modem connection or similar means for monitoring and controlling data input, current input, and readings. (0051, lines 1-11)

by relating the measured characteristic to a predetermined data set indicating a relationship between corresponding apparent characteristic values and conditions of the tensile support, the relationship being based upon load information:

> When the rope being tested reaches a predetermined threshold value of resistance, it is an indication to replace the rope. The threshold value can be determined by testing a similar rope at different stress levels for load and fatigue, for measured numbers of cycles, and measuring the corresponding resistance and residual load bearing strength. A relationship between resistance and load bearing capacity can then be established. (0049, lines 1-8)

The Examiner also asserts that Robar discloses that the electrical characteristic is resistance:

> Another embodiment of the present invention involves applying electric current to a rope and measuring resistance values for comparison to pre-stored data in order to determine rope condition. (0007, lines 6-9)

As noted above, the invention of Robar teaches many of the features of the claimed invention and while the invention of Robar does teach relating the measured characteristic to a predetermined data set including a relationship between corresponding apparent characteristic values and conditions of the tensile support, wherein the relationship is based upon load information, Robar does not explicitly indicate that the relationship is based on a determined rate of degradation for the selected load.

For the reasons provided above with respect to the rejection of claims 16 and 20 under 35 U.S.C. §103 based on Clarke in view of Barrett, the Examiner maintains that Barrett teaches an elevator load weighting device including means for positioning a selected load on a plurality of tension members (column 2, lines 1-6

and column 3, lines 4-9) and determining a rate of degradation of an individual tension member for a selected load by monitoring how the degradation varies over time based on how much of the selected load is carried by each tension member (column 3, lines 10-16).

Further, the Examiner asserts that it would have been obvious to one having ordinary skill in the art to modify the invention of Robar to explicitly indicate that the relationship is based on a determined rate of degradation for the selected load because the invention of Robar does determine degradation of a tensile support based on a measured resistance and load information and Barrett suggests that the combination would have improved the degradation analysis of Robar by using the load information to determine how stretching/degradation varies over time thereby allowing Robar to better predict when such stretching/degradation will result in support failure (column 3, lines 10-16).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure.

U.S. Patent No. 6,123,176 to O'Donnell et al. teaches a rope tension monitoring assembly and method wherein monitoring the load carried by each rope provides an indication of the level of degradation of each rope.

U.S. Patent No. 6,405,833 to Baranda et al. teaches a flexible flat rope sheave assembly with separate shoulder and flange surfaces having varying friction

properties as well as that the degradation of a tensile support depends on sheave contact information (column 1, lines 44-49).

U.S. Patent No. 6,752,029 to Madden et al. teaches a load measurement device.

U.S. Patent No. 6,662,660 to Smith teaches an apparatus for testing aramid fiber elevator cables.

U.S. Patent No. 5,804,964 to Hamelin et al. teaches a wire rope damage index monitoring system.

U.S. Patent No. 6,247,359 to De Angelis teaches an apparatus for identification of need to replace synthetic fiber ropes.

U.S. Patent No. 6,133,731 to Melamud et al. teaches a method and apparatus for the on-line measurement of the strength of metal cables.

U.S. Patent No. 5,821,430 to Kwun et al. teaches a method and apparatus for conducting in-situ nondestructive tensile load measurements in cables and ropes.

JP Patent Application Publication No. 2001-302135 to Kato et al. teaches a discrimination method of deterioration state of a rope and elevator using the same.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFREY R. WEST whose telephone number is (571)272-2226. The examiner can normally be reached on Monday through Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eliseo Ramos-Feliciano can be reached on (571)272-7925. The fax

phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffrey R. West/
Primary Examiner, Art Unit 2857

March 5, 2009